UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/936,479	09/13/2001	Siegfried Schweidler	PD990014	6074

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EXAMINER
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ART UNIT	PAPER NUMBER
2185	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

		Application No.	Applicant(s)
Office Action Summary		09/936,479	SCHWEIDLER ET AL.
		Examiner	Art Unit	
		Zhuo H. Li	2185	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>19 July 2007</u>.

2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-9</u> is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1-9</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a) ☐ All   b) ☐ Some * c) ☐ None of:

         1. ☐ Certified copies of the priority documents have been received.

         2. ☐ Certified copies of the priority documents have been received in Application No. _____.

         3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)   4) ☐ Interview Summary (PTO-413)
                                                     Paper No(s)/Mail Date. _____ .
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)   5) ☐ Notice of Informal Patent Application
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)   6) ☐ Other: _____ .
     Paper No(s)/Mail Date _____ .

DETAILED ACTION

Response to Amendment

1.   This Office action is in responds to the amendment filed on 7/19/2007, claims 1-9 are

pending in the application.

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3.   Claims 1, 5 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Gillard et

al. (US PAT. 5,404,166 hereinafter Gillard).

        Regarding claim 1, Gillard disclose a method for the management of data received via a

serial data bus in a receiving device, i.e., block formatter (10, figure 1), comprising the steps of

receiving data transmitted in bus packets, i.e., data steam having a variable length (col. 3 line 54

through col. 4 line 8), each bus packet (80, figure 3) having a header(85, figure 3) and a payload

data field, i.e., video data section (90, figure 3) and (col. 4 lines 13-16), the payload data field

being divided into a number of data blocks having a defined length, i.e., fixed length data block

(col. 4 lines 1-8, lines 17-21 and col. 6 lines 23-26), a data block consisting of a plurality of data

words, the plurality being a fixed amount, i.e., buffer (160, figure 4) resided within the block

formatter of the input side wherein the buffer (160) comprises four 8-bit latches, concatenated

together to form the 32-bit wide buffer, wherein the each of the 8-bit latches are in a fixed length

format to store the incoming variable length data into a fixed length format latches (col. 5 line 55

through col. 6 line 1 and col. 6 lines 47-53), a combination of a defined number n of data blocks

forming a data source packet of fixed length, i.e., a count accumulator (125, figure 4) maintains a

count of the cumulative lengths of payload data field related to the video data steam, these counts

are then summed to generate a total count, when the total count reaches the available length of

the video data section, and end of block signal is generated by the count accumulator, section-by-

section transmission of the data source packet within the framework of data blocks being

permitted, i.e., the video data steam stored in the buffer (160) are transferred out to the FIFO

buffer (170, figure 4) in a fixed length format, then transferred out to multiplexers (210, 220 and

230) by sequence in a 8-bit data words format (col. 6 line 47 through col. 7 line 57, and figures

5-6), and carrying out a modulo-n counting of the data blocks in order to determine the data

source packet boundaries, and in that the beginning of a new data source packet is signaled to a

memory management device at the beginning of the next counting interval, i.e., format

accumulator (120) generates a 5-bit output signal representing a modulo-32 count of the code

length of valid luminance Huffman codes received during the formatting of a current data block,

count accumulator (125) maintains a count of the cumulative lengths of payload data field related

to the video data steam, these counts are then summed to generate a total count, when the total

count reaches the available length of the video data section, and end of block signal is generated

by the count accumulator, a boundary accumulator (126, figure 3) incorporate with pointer, count

accumulator and header with starting address indicative of the position of the video data, to

determining the end of each variable length video data steam in a fixed length blocks (col. 4 line

34 through col. 5 line 35).

Regarding claim 5, the limitations of the claim are rejected as the same reasons set forth

in claim 1.

Regarding claim 8, Gillard discloses the counter, i.e., count accumulator (125) by which

data are counted in particular in units of bytes and which outputs a data block counting signal if

the number of data that have been countered are as many as defined as belonging a data block

(col. 4 line 34 through col. 5 line 35)

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

5.   This application currently names joint inventors. In considering patentability of the

claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

claims was commonly owned at the time any inventions covered therein were made absent any

evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out

the inventor and invention dates of each claim that was not commonly owned at the time a later

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c)

and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6.   Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over by Gillard et al.

(US PAT. 5,404,166 hereinafter Gillard).

Regarding claim 4, Gillard differs from the claimed invention in not specifically teaches

wherein the defined number n of data blocks of a data source packet corresponds to the number 8

and the modulo-n counting is correspondingly modulo-8 counting. However, it is old and

notoriously well known in the art of having the defined number of n data blocks corresponding to

the number of 2 to power x, where x = 1, 2, 3, ..., in which 8 is equal to 2 to power 3. In

addition, utilizing modulo-8 counter do not have a disclosed purpose nor overcome any

deficiencies in the prior art such that the number of n of data blocks of a data source packet may

contain any number, i.e., 2, 4, 8, ... Noted Gillard teaches the variable video data frame stored

in a plurality of fixed length data block in 8-bit data words (col. 5 line 55 through col. 6 line 1),

and count accumulator (125) maintains a count of the cumulative lengths of payload data field

related to the video data steam, these counts are then summed to generate a total count, when the

total count reaches the available length of the video data section, and end of block signal is

generated by the count accumulator, a boundary accumulator (126, figure 3) incorporate with

pointer, count accumulator and header with starting address indicative of the position of the

video data, to determining the end of each variable length video data steam in a fixed length

blocks (col. 4 line 34 through col. 5 line 35). Therefore, it would have been obvious to a person

of ordinary skill in the art at the time the invention was made to modify Gillard in utilizing

modulo-8 counter for counting 8 of data blocks of a data source packet, as disclosed supra,

because applicant does not disclose that the number 8 and modulo-8 counting, as opposed to

other size, overcome a deficiency in the prior art or for any stated purpose.

7.   Claims 2-3 and 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Gillard et al. (US PAT. 5,404,166 hereinafter Gillard) in view of Boyer et al. (US PAT.

5,410,546 hereinafter Boyer).

Regarding claims 2-3, Gillard differs from the claimed invention in not specifically

teaches each bus packet being subject to CRC checking and the checking results being buffer-

stored in order to be able to ascertain whether a data source packet transmitted in two or more

bus packets has been transmitted without transmission errors, wherein a reference count reading

is transmitted in each bus packet in order to check the completeness of the transmitted data, and

in which comparison counting of the received data block is effected and, when the data block

associated with the reference counter reading is received, the result of the comparison counting is

compared with the reference counter reading and an error signal is output in the event of non-

correspondence. However, Boyer discloses a data transferring device (figure 1) comprising a

blocking/compression unit (105) compresses the data and transmits the data over bus (108) in

packets to both Page CRC generator (101) for CRC generation and to page buffer memory (102)

for temporary storage, and CRC checker (104) computes a CRC code for the entire page buffer

as each byte is transmitted over bus (110) to block storage device (107), and may invoke

appropriate error recovery procedures when it detects a compare error from CRC checker (col. 7

line 11 though col. 8 line 63). Therefore, it would have been obvious to a person of ordinary

skill in the art at the time the invention was made to modify the data formatter of Gillard in

having each bus packet being subject to CRC checking and the checking results being buffer-

stored in order to be able to ascertain whether a data source packet transmitted in two or more

bus packets has been transmitted without transmission errors, wherein a reference count reading

is transmitted in each bus packet in order to check the completeness of the transmitted data, and

in which comparison counting of the received data block is effected and, when the data block

associated with the reference counter reading is received, the result of the comparison counting is

compared with the reference counter reading and an error signal is output in the event of non-

correspondence, as per teaching by the data transfer device of Boyer, because it assures the

integrity of the data at all times between receipt from the compression unit and transmission to

the storage device, and permits theses CRC computations and combinations to proceed as the

data is received without loss of performance at the high data rates common in current high

density tape storage subsystem (col. 5 lines 28-34).

Regarding claims 6-7, the limitations of the claims are rejected as the same reasons set

forth in claims 2-3.

8.   Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gillard et al. (US

PAT. 5,404,166 hereinafter Gillard) in view of Lo et al. (US PAT. 6,324,178 hereinafter Lo).

Regarding claim 9, Gillard differs from the claimed invention in not specifically teaching

data bus being designated according to the IEEE 1394 standard and the apparatus is part of data

link layer module in the interface for this data bus. However, Lo teaches IEEE 1394 serial bus

communication standard becoming a popular standard adopted by manufacturers of computer

systems and peripheral components for its high speed and interconnection flexibilities (col. 1

lines 31-35). Therefore, it would have been obvious to a person of ordinary skill in the art at the

time the invention was made to modify Gillard in having data bus being designated according to

the IEEE 1394 standard and the apparatus is part of data link layer module in the interface for

this data bus, as per teaching of Lo, because it provides high speed and interconnection

flexibilities.

Response to Arguments

9.   Applicant's arguments with respect to claims 1-9 have been considered but are moot in

view of the new ground(s) of rejection.

Conclusion

10.   Applicant's amendment necessitated the new ground(s) of rejection presented in this

Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this

final action.

11.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

Machado et al. (US PAT. 5,517,631) disclose miniature disk drive having embedded

sector servo with split data fields and automatic on-the-fly data block sequencing, wherein a

programmable data sequencer transfers fixed length data blocks between variable length storage

segments of a magnetic storage disk (abstract).

Fimoff et al. (US PAT. 5,563,920) discloses method of processing variable size blocks of

data by storing numbers representing size of data blocks in a FIFO (abstract).
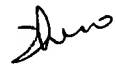
Best et al. (US PAT. 5,459,853) discloses efficient variable-block data storage system

employing a staggered fixed-block-architecture array (abstract).

12.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Zhuo H. Li whose telephone number is 571-272-4183. The

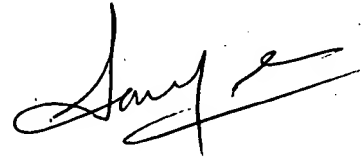examiner can normally be reached on Mon - Fri 10:00am - 6:30pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Sanjiv Shah can be reached on 571-272-4098. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

13.   Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Zhuo H. Li

Patent Examiner
August 2, 2007

SANJIV SHAH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100